CLAIMS

What is claimed is:

1.   A method comprising:

defining a plurality of minutiae in a fingerprint image;

estimating a score associated with a minutia corresponding to the validity of the minutia; and

matching the fingerprint image against one or more sample fingerprint images utilizing a partial point set pattern matching (PSPM) algorithm.

2.   The method of claim 1, wherein a definition of a minutia includes data related to x,y coordinates and an angle for the minutia.

3.   The method of claim 1, wherein a definition of a minutia includes data related to a classification of the minutia as a termination or bifurcation minutia.

4.   The method of claim 1, wherein a definition of a minutia includes data related the estimated score for the minutia.

5.   The method of claim 1, wherein estimating a score associated with a minutia includes estimating a score for ridge flow properties associated with the minutia.

6.   The method of claim 1, wherein estimating a score associated with a minutia includes estimating a score for valley flow properties associated with the minutia.

7.   The method of claim 1, wherein estimating a score associated with a minutia includes estimating a score for noise associated with the minutia.

8.   The method of claim 1, wherein estimating a score associated with a minutia includes determining a score by summing a score for ridge flow properties, valley flow properties, and noise associated with the minutia.

9.   The method of claim 1, wherein the partial point set pattern matching (PSPM) algorithm performs two-dimensional PSPM matching under translation and rotation.

10.   An apparatus comprising:

an integrated circuit; and

a processor included with the integrated circuit to implement operations including:

defining a plurality of minutiae in a fingerprint image;

estimating a score associated with a minutia corresponding to the validity of the minutia; and

matching the fingerprint image against one or more sample fingerprint images utilizing a partial point set pattern matching (PSPM) algorithm.

11.   The apparatus of claim 10, wherein a definition of a minutia includes data related to x,y coordinates and an angle for the minutia.

12.   The apparatus of claim 10, wherein a definition of a minutia includes data related to a classification of the minutia as a termination or bifurcation minutia.

13.   The apparatus of claim 10, wherein a definition of a minutia includes data related the estimated score for the minutia.

14.   The apparatus of claim 10, wherein estimating a score associated with a minutia includes estimating a score for ridge flow properties associated with the minutia.

15.   The apparatus of claim 10, wherein estimating a score associated with a minutia includes estimating a score for valley flow properties associated with the minutia.

16.   The apparatus of claim 10, wherein estimating a score associated with a minutia includes estimating a score for noise associated with the minutia.

17. The apparatus of claim 10, wherein estimating a score associated with a minutia includes determining a score by summing a score for ridge flow properties, valley flow properties, and noise associated with the minutia.

18. The apparatus of claim 10, wherein the partial point set pattern matching (PSPM) algorithm performs two-dimensional PSPM matching under translation and rotation.

19 A machine-readable medium having stored thereon instructions, which when executed by a machine, cause the machine to perform the following operations comprising:

defining a plurality of minutiae in a fingerprint image;

estimating a score associated with a minutia corresponding to the validity of the minutia; and

matching the fingerprint image against one or more sample fingerprint images utilizing a partial point set pattern matching (PSPM) algorithm.

20. The machine-readable medium of claim 19, wherein a definition of a minutia includes data related to x,y coordinates and an angle for the minutia.

21. The machine-readable medium of claim 19, wherein a definition of a minutia includes data related to a classification of the minutia as a termination or bifurcation minutia.

22. The machine-readable medium of claim 19, wherein a definition of a minutia includes data related the estimated score for the minutia.

23. The machine-readable medium of claim 19, wherein estimating a score associated with a minutia includes estimating a score for ridge flow properties associated with the minutia.

24. The machine-readable medium of claim 19, wherein estimating a score associated with a minutia includes estimating a score for valley flow properties associated with the minutia.

25. The machine-readable medium of claim 19, wherein estimating a score associated with a minutia includes estimating a score for noise associated with the minutia.

26. The machine-readable medium of claim 19, wherein estimating a score associated with a minutia includes determining a score by summing a score for ridge flow properties, valley flow properties, and noise associated with the minutia.

27. The machine-readable medium of claim 19, wherein the partial point set pattern matching (PSPM) algorithm performs two-dimensional PSPM matching under translation and rotation.